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Telnet Output Linefeed Disposition

1. Command name and code

NAOLFD 16 (Negotiate About Output Linefeed Disposition)

2. Command meanings

In the following, we are discussing a simplex connection, as described in the NAOL and NAOP Telnet Options.

IAC DO NAOLFD — The data sender requests or agrees to negotiate about output linefeed disposition with the data receiver. In the case where agreement has been reached and in the absence of further subnegotiations, the data receiver is assumed to be handling output linefeed considerations.

IAC DON'T NAOLFD — The data sender refuses to negotiate about output linefeed disposition with the data receiver, or demands a return to the unnegotiated default mode.

IAC WILL NAOLFD — The data receiver requests or agrees to negotiate about output linefeed disposition with the sender. In the case where agreement has been reached and in the absence of further subnegotiations, the data receiver alone is assumed to be handling output linefeed considerations.

IAC WON'T NAOLFD — The data receiver refuses to negotiate about output linefeed disposition, or demands a return to the unnegotiated default mode.

IAC SB NAOLFD DS <8-bit value> IAC SE
The data sender specifies, with the 8-bit value, which party should handle output linefeeds and what their disposition should be. The code for DS is 1.

IAC SB NAOLFD DR <8-bit value> IAC SE
The data receiver specifies, with the 8-bit

value, which party should handle output linefeeds and what their disposition should be. The code for DR is 0.

3. Default

DON'T NAOLFD/WON'T NAOLFD. In the default absence of negotiations concerning which party, data sender or data receiver, is handling output linefeed considerations, neither party is required nor prohibited from handling linefeeds; but it is appropriate if at least the data receiver handles them, albeit primitively.

4. Motivation for the Option

Please refer to section 4 of the NAOL and of the NAOLFD Telnet

Please refer to section 4 of the NAOL and of the NAOLFD Telnet option descriptions.

5. Description of the Option

The data sender and the data receiver use the 8-bit value along with the DS and DR SB commands as follows:

8-bit value	Meaning
0	Command sender suggests that he alone will handle linefeeds, for the connection.
1 to 250	Command sender suggests that the other party alone should handle linefeeds, but suggests that a delay of the indicated value be used. The value is the number of character-times to wait or number of NULs to insert in the data stream before sending the next data character. (See qualifications, below.)
251	Not allowed, in order to be compatible with related Telnet options.
252	Command sender suggests that the other party alone handle linefeeds, but suggests that they be discarded.
253	Command sender suggests that the other party alone should handle linefeeds, but suggests that linefeeds be simulated.
254	Command sender suggests that the other party alone should handle output linefeeds but suggests waiting for a character to be

transmitted (on the other simplex connection) before sending more data. (See qualifications, below.) Note that, due to the assynchrony of the two simplex connections, phase problems can occur with this option.

255 Command sender suggests that the other party alone should handle output linefeeds and suggests nothing about how it should be done.

The guiding rules are that:

(1) if neither data receiver nor data sender wants to handle output linefeeds, the data receiver must do it, and

(2) if both data receiver and data sender want to handle output linefeed disposition, the data sender gets to do it.

The reasoning for the former rule is that if neither wants to do it, then the default in the NAOLFD option dominates. If both want to do it, the sender, who is presumed to have special knowledge about the data, should be allowed to do it, taking into account any suggestions the receiver may make.

Simulation is defined as the replacement of the linefeed character by new-line (see following) and enough blanks to move the print head (or line pointer) to the same lateral position it occupied just prior receiving the linefeed. To avoid infinite recursion, such simulation is allowed only for linefeed characters that are not immediately preceded by carriage-returns (that is, part of a Telnet new-line combination). It is assumed that linefeed simulation will be necessary for printers that do not have a separate linefeed (like the IBM 2741); in this case, end-of-line character padding can be specified through NAOCRD. Any padding (0 < <8-bit-value> < 251) of linefeed characters is to be done for ALL linefeed characters.

Note that delays, controlled by the data sender, must consist of NUL characters inserted immediately after the character. This is necessary due to the assynchrony of network transmissions. Additionally, due to the presence of the Telnet end-of-line convention, it may be necessary to add carriage-return padding or delay after the associated linefeed (see NAOCRD Telnet option).

As with all option negotiations, neither party should suggest a state already in effect except to refuse to negotiate; changes should be acknowledged; and once refused, an option should not be resuggested until "something changes" (e.g., another process starts).

At any time, either party can disable further negotiation by giving the appropriate WON'T NAOLFD or DON'T NAOLFD command.